

Amendments to the Specification

Amend paragraph [0001] as follows:

[0001] The present invention relates to a method for producing a connection area on a work piece which is positioned precisely with respect to a reference area on the work piece, ~~according to the preamble of patent claim 1.~~ The present invention also relates to a device for carrying out the method.

Add the following new heading before paragraph [0002]:

BACKGROUND

Add the following new heading before paragraph [0009]:

SUMMARY OF THE INVENTION

Amend paragraph [0009] as follows:

[0009] ~~The invention is therefore based on the object of proposing~~ An object of the present invention is to propose a method for producing connection areas on a work piece, in particular on a vehicle body, in a precisely positioned fashion, which method is associated with a significantly reduced degree of calibration work and permits significantly more cost-effective sensors to be used. In addition, the intention is to increase the accuracy in comparison with conventional methods. ~~The invention is also based on the object of proposing~~ An alternate or additional object is to propose a device which is suitable for carrying out the method.

Delete paragraph [0010].

Amend paragraph [0011] as follows:

[0011] ~~According to said claims,~~ a A sensor system which is fixedly ~~permanently~~ connected to the tool ~~and~~ forms a robot-guided tool/sensor combination with it and is used to position the processing tool with respect to the vehicle body. This tool/sensor combination is firstly moved under robot control into a proximity position (which is permanently programmed and

independent of the current position of the vehicle body) with respect to the vehicle body and is then moved, in the course of a closed-loop control process, into a preliminary position (oriented with respect to the reference area on the vehicle body in a precisely positioned fashion). In the closed-loop control process which moves the tool/sensor combination from the proximity position into the preliminary position, (actual) measured values of the reference area are generated on the vehicle body by the sensor system; these (actual) measured values are compared with (setpoint) measured values which are generated in a preceding setup phase, and then the tool/sensor combination is moved by an amount equal to a movement vector (comprising linear movement and/or rotations) which is calculated using what is referred to as a “Jacobi matrix” (or “sensitivity matrix”) from the difference between the (actual) and (setpoint) measured values. Both the (setpoint) measured values and the Jacobi matrix are determined within the scope of a setup phase, preceding the actual positioning and processing operations, for the respective tool/sensor combination together with the vehicle body area to be processed. This setup phase is run through once in the course of the setting of a new combination of tool, sensor system, vehicle body type and processing problem.

Add the following new heading before paragraph [0023]:

BRIEF DESCRIPTION OF THE DRAWINGS

Amend paragraph [0023] as follows:

[0023] ~~Further advantageous embodiments of the invention can be found in the subclaims.~~ The invention is explained in more detail below with reference to two exemplary embodiments which are illustrated in the drawings, in which:

Add the following new heading before paragraph [0030]:

DETAILED DESCRIPTION